Please add the following new claims:

16. (New) An optoelectronic sensor based on optodes, comprising:

a semiconductor substrate;

a plurality of separate light-sensitive sensors arranged on the semiconductor substrate;

a light emitter located in a center of the semiconductor substrate; and

a transparent optode material covering the light emitter and the plurality of separate light-sensitive sensors, wherein:

the transparent optode material is reflective on a side that faces away from the semiconductor substrate.

17. (New) The optoelectronic sensor according to claim 16, further comprising:

metal particles arranged into the transparent optode material and by which a reflectivity is created.

18. (New) The optoelectronic sensor according to claim 16, further comprising:

an opaque material covering the transparent optode material.

19. (New) The optoelectronic sensor according to claim 16, wherein:

the transparent optode material is a polymer to which an indicator substance is added.

20. (New) The optoelectronic sensor according to claim 19, wherein:

the indicator substance includes pigment molecules.

21. (New) The optoelectronic sensor according to claim 18, wherein:

the opaque material is a polymer.

22. (New) The optoelectronic sensor according to claim 18, wherein:

the plurality of separate light-sensitive sensors are arranged as sectors and rotationally symmetrically around the light emitter.

23. (New) The optoelectronic sensor according to claim 16, wherein:

the semiconductor substrate is an n-type silicon substrate, and

the plurality of separate light-sensitive sensors are made of p-type silicon.

24. (New) The optoelectronic sensor according to claim 16, wherein:

the plurality of separate light-sensitive sensors form photodiodes, and

the light emitter is an LED.

25. (New) The optoelectronic sensor according to claim 16, wherein:

the transparent optode material detects one of a nitrogen oxide and carbon monoxide.

26. (New) The optoelectronic sensor according to claim 16, further comprising:

an oxidation material provided on a carrier material.

27. (New) The optoelectronic sensor according to claim 16, further comprising:

a molecular sieve.

28. (New) The optoelectronic sensor according to claim 16, further comprising:

a plurality of barriers arranged between transmission branches.

29. (New) The optoelectronic sensor according to claim 16, wherein:

the light emitter can be operated by an electrical pulse.

30. (New) A gas sensor array, comprising:

a plurality of array elements, each array element corresponding to an optoelectronic sensor based on optodes, the optoelectronic sensor including:

a semiconductor substrate,

a plurality of separate light-sensitive sensors arranged on the semiconductor substrate,

a light emitter located in a center of the semiconductor substrate, and